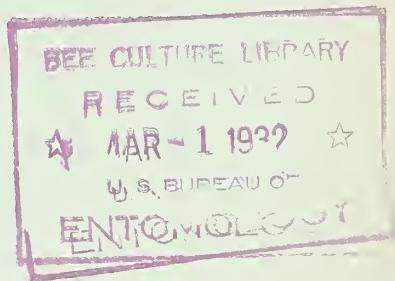


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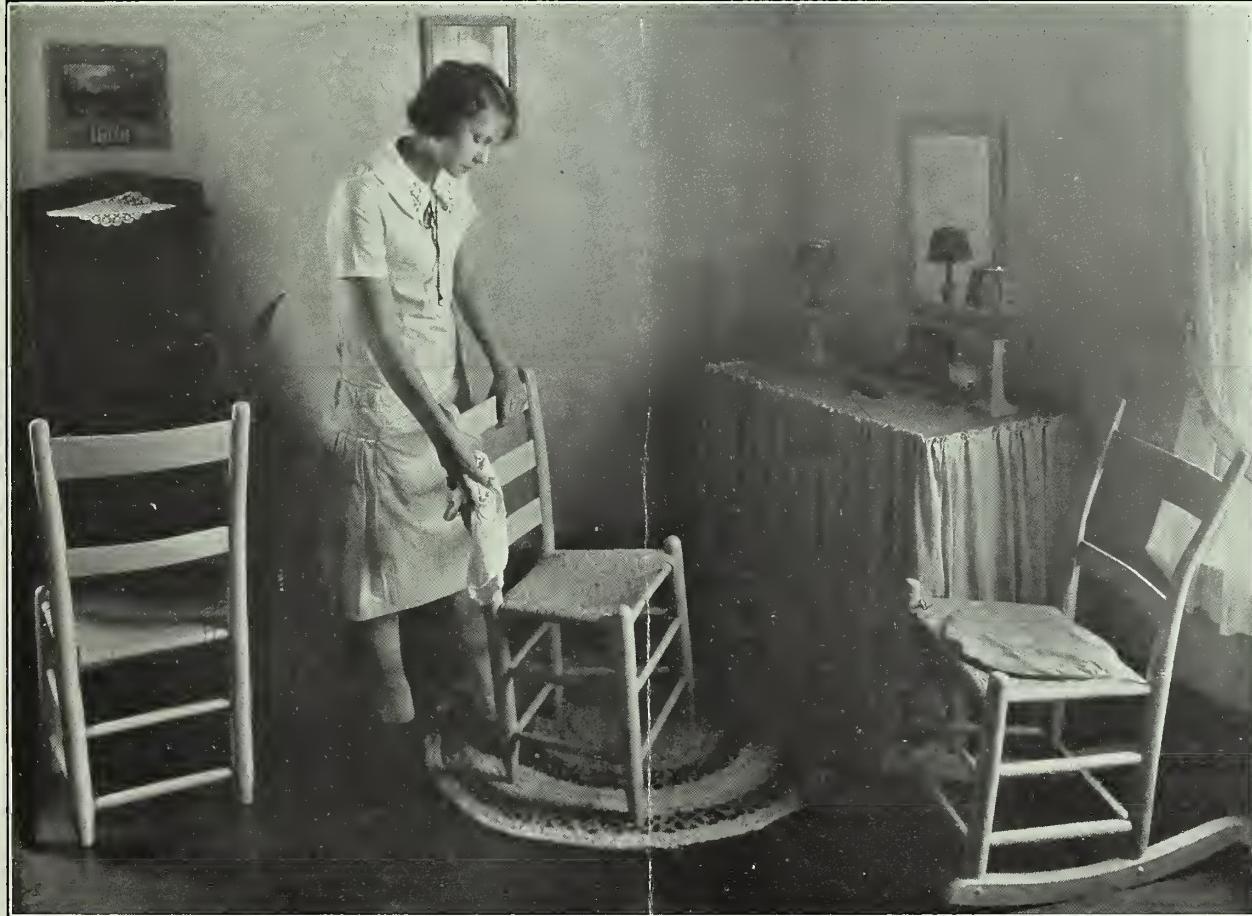
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Extension Service Review



VOL. 3, No. 2

FEBRUARY, 1932



THE 4-H CLUB GIRL LEARNS TO COMBINE ATTRACTIVENESS AND COMFORT WITH ECONOMY

ISSUED MONTHLY BY THE EXTENSION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.



In This Issue

JUST WHAT is the scope of economic extension? It's a question on which many of us have not been altogether clear. In vigorous forthright fashion Nils A. Olsen, Chief of the Bureau of Agricultural Economics, gives us the answer. He outlines in two articles on some essentials in economic extension the opportunities in this field as he sees them. The first of these, appearing in this issue of the REVIEW, deals with an understanding of world forces. In the second, he takes up next month the meeting of the problems at hand. It's a program that challenges.



IN FOURTEEN YEARS, the Washington Cooperative Egg and Poultry Association, with its chief market the breadth of a continent away, has built up an annual business of \$20,000,000. It has accomplished, also, two important aims of every cooperative marketing association—a lower price to the consumer and, at the same time, a larger share to the producer of the consumer's dollar. As W. D. Buchanan, extension poultry specialist, brings out in the story the loyalty of the individual members of the association and the consistent effort they have made to maintain high production and marketing standards have done much to make possible this truly remarkable showing.

MARY COLLOPY of Wyoming gives us a new appreciation of what achievement days may mean when they bring together neighbors living 35 miles apart. Again, when she mentions that in some instances special recognition is given to those women who come more than 100 miles to make their contribution to local home demonstration achievement. This sisterhood of the magnificent distances, we find, is just as keenly alive as are the women of the more closely settled communities to all that makes for convenience, saving, comfort, and charm in the home and its surroundings.

Or

COOPERATION results more from an attitude of mind than from a form of organization. That is the thought Dean L. E. Call of Kansas drives home in his discussion of the part of research and extension forces in developing agricultural programs and policies. "Yet," he adds, "much may be done to organize work in such a way as to promote cooperation." It's a thought, isn't it, that fits well into carrying on all extension effort?

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On the Calendar

SOUTH DAKOTA's annual State extension conference, to be held at Brookings, is scheduled for March.



RALPH TRAEFELET, county extension agent for Osceola County, Mich., gets from local undeveloped marl beds the lime supply needed to make a go of his soil fertility program. Unemployed road building machinery was put to work in getting out the marl, with a saving of \$12,000 to the farmers of his county.

AS LEADER of the many forces which work for a more profitable and satisfying country life, the extension worker must assume many different rôles. So says C. B. Smith as he discusses the needs of professional improvement and how planned and supervised study can aid the extension worker to recognize and meet his problems successfully.



SEVENTY-FIVE KANSAS 4-H boys and girls at a summer camp in Rawlins County put in 4 to 5 hours a day studying the business of farming. They not only get the theory, but in line with 4-H tradition, take practice in conducting the business transactions they have been told about. Certainly, a new idea in hot-weather recreation!

STEPPING UP from one commercial poultry flock, only 12 people interested in making poultry pay, and no hatcheries in 1924 to 84 farms raising more than 500 chickens each year, 284 farms having more than 100 hens, and 3 hatcheries in 1931 is one measure of the progress that Mary Donney made in putting the live-at-home program into effect in Warren County, Miss. In promoting home gardens she was no less successful. A good living and more cash income on every farm was the end sought and the end gained.

Extension Service Review

VOL. 3

WASHINGTON, D. C., FEBRUARY, 1932

NO. 2

Some Essentials in Economic Extension

NILS A. OLSEN,

Chief, Bureau of Agricultural Economics

Part 1. An understanding of world forces

WHAT is the purpose of economic extension? There is, of course, the purely economic, material motive to increase the economic returns of farmers. But it would be very short-sighted to set that as our only objective. Why do we wish to increase farmers' incomes? Because we wish to increase their level of living. After all, richer and nobler living is what we are all striving for. Material things alone do not yield the greatest satisfactions. The joys springing from the intellect and from a broad culture are far more soul-satisfying. Of course, we always have to bear in mind that good incomes help us build desirable levels of living.

But we are not even satisfied to say that the sole purpose of extension is to help the individual selfishly to build up merely his own income and level of living. There are still greater objectives. We must never forget that we are but individuals in a Nation, the welfare of which is all-important. It behooves us so to order ourselves that whatever we do is for the material, intellectual, and social welfare of the Nation as a whole. That is a great ideal that should be planted in the mind of every boy and girl, man and woman, in America.

World Economic Forces

In your extension work, particularly in the earlier days, you have wrestled with a type of problem that differs materially from that in economic extension.

In the past you have dealt largely with the facts and forces of the physical and biological world. These contrast markedly with the facts and forces of the economic world. In my judgment one of the greatest needs now is to bring home to those whom we seek to assist the fact that there are fundamental economic forces operating in the world—forces that are dynamic, shifting, and powerful. They operate as a result of mass action and they profoundly affect our fortunes. We can not override these forces, but they can harm us if we do not operate

with a full understanding of them, and it is very essential that we understand also that economic forces operate not only within the boundaries of the United States but that they are world-wide in their influence.

Look about you and you will see that this is so. World influences play upon the markets in all corners of the world

and often yield grudgingly to interference, it is equally true that the degree to which they operate may be influenced by human policies and activities. So true is this that many of the most serious situations facing our agriculture to-day grow out of unsound economic policies of the past or the failure to adjust our activities to world-wide tendencies over which we have no control. This distinction is important in our effort to help agriculture, because it emphasizes the responsibility that rests upon us to correct unsound economic policies and to adjust our activities to developments which we can not control.

Potent Influences

A recent farm-income report issued by the bureau shows that farm income, in the last two years, has dropped 42 per cent and prices of farm products 50 per cent. At the same time, production in the United States has remained at rather even levels from 1925 to date. There is a dramatic story in that report. Something in addition to surpluses have undermined agricultural prices.

But what has happened to our markets? We must understand these larger elements in the situation. We have been stressing minor yet important influences such as preferences of consumers, seasonal influences, and the like, upon demand. These factors affect the demand for agricultural products, but we can not explain the collapse of markets in terms of those influences. There are more powerful forces at work.

We can not measure accurately the effects of the various factors that have brought on the present situation, but at least we know what they are. The great destruction of wealth in the World War has had a great deal to do with undermining the purchasing power of consumers. This is particularly true of foreign peoples. We can not have a war of that kind without destroying wealth and ability to buy. We can not have a war of that kind without disrupting industry.



Nils A. Olsen,
Chief, Bureau of Agricultural Economics

to which our products go. These same influences react upon the prices our farmers receive for products sold at home. Witness the growing expansion of production in foreign parts and the mounting supplies poured into world markets. It is not difficult to see how this touches our lives in the United States. It is almost literally true that transportation and communication have brought the most distant parts of the world to our very doors.

But do not misunderstand me. While economic forces reflect mass reactions

We can not ignore the effects of war upon the economic well-being of our country. Our farm people should see this in a concrete way.

The financial elements, so much stressed in recent weeks, undoubtedly affect the buying power of peoples. Reparations, international debts, unbalanced budgets, upset currencies—all interfere with the purchasing power of consumers. Our policy of foreign lending doubtless bolstered our markets during recent years, but it is fair to ask if such policies are beneficial to our markets in the long run.

Consider for a moment the matter of protective barriers placed about our foreign markets. Following the war, under the driving force of the spirit of nationalism, various countries gradually moved up these barriers until in 1929 they were as high as before the war. Then came the collapse in price. In the effort to bolster their markets, every conceivable device was uncovered—tariffs, import restrictions, subsidies, controlled acreages, and any number of others. You as extension workers should not ignore these influences because they far overshadow the effect of many other elements.

Population Growth

Growth of population affects both domestic and foreign markets. At the present time our own population is increasing by a million a year compared with two millions 10 years ago. If this rate of decline continues, our population in 1960, it is estimated, will be stationary at around 25,000,000 more people than we now have. Of course, we may revise our immigration policy, but it would require a very drastic revision to restore the rate of increase that obtained 10 years ago. In other words, we are not likely to have a progressively increasing demand for farm products in this country such as we have had in the past. The consumer can shift from one food to another, but his stomach will hold only about so much. The same tendency in population growth has been observed in the industrial countries of northeastern Europe which have been our great markets. This tendency is less marked in southern Europe. Russia and the Orient, on the other hand, show a greater rate of population growth. If the trend toward smaller populations continues in the industrialized countries we shall have to take it into account in our plans; if it is reversed, we shall still have to take it into account.

Foreign Competition

Our farmers can not afford to blink the fact that during the last two decades there has been enormous expansion in

the area of land the world over. The World War demoralized European agriculture. Overseas countries stepped to the front and provided the supplies then so urgently needed. Naturally they have sought to hold these gains and to expand still further. Meanwhile, European agriculture has come back and Russia looms up once more as a serious competitor. If the Russian agricultural program materializes, there will be competition of a very real nature for the American farmer. I hope that the tendency to increase the standard of living in Russia will continue; that will help absorb a larger portion of her supplies. But under present conditions, with the Government controlling supplies and apparently disposed to dump these supplies upon foreign markets, we have in Russia a type of competition that must be watched very closely by American agriculture. In most new countries—Canada, Argentina, and Australia, in which phenomenal agricultural expansion has taken place—there must still be large areas of arable land suitable for development. Just how much, no one seems to know.

So on the demand side there are powerful world forces undermining our markets. We must know what they are and adjust to them. On the other hand, competition has become increasingly keen. We can not stop it, but we can study it and appraise its possibilities of success and adjust our plans accordingly.

Next month, continuing the discussion of some essentials in economic extension, Chief Olsen will turn to the immediate problems we have at hand and the part that extension workers can take in meeting them. He will touch on the problems of submarginal lands, farm taxation, rural credits, the tariff, production adjustments, and the distribution of farm products.

What he will have to say regarding these problems and their relation to the extension program will be of absorbing interest to readers of the REVIEW.

RURAL BUILDING in Kentucky carries on. County agents report 1,271 farm buildings constructed or remodeled last year from plans furnished by the college of agriculture. These included 175 dairy barns, 88 hog houses, 626 poultry houses, 75 silos, and 308 other buildings put up on 1,001 farms.

In addition, 33 new homes were built and 80 remodeled with the advice and help of the county agents and plans from the college. The agricultural engineering section has prepared 144 sets of plans for all kinds of farm buildings and equipment which are sent out on request.



C. B. Smith,
Assistant Director of Extension Work

C. B. Smith Promoted

C. B. Smith, chief of the office of cooperative extension work, was appointed assistant director of extension work January 11.

Doctor Smith's new duties will include direct responsibility for the activities of the extension service force both in Washington and in the field. This service includes office of cooperative extension work, of which Doctor Smith will continue to be chief, and the office of exhibits and office of motion pictures. By this appointment Director Warburton will be able to give more attention to matters of major administrative importance, policies, legislation, extension matters affecting other governmental departments, interbureau relationships, and similar matters.

Both the director and the assistant director were associated with the department's first efforts in extension work. Director Warburton came to the department in 1903 as scientific aid in the office of farm management of the Bureau of Plant Industry and was sent to Texas to supervise demonstration farms. Doctor Smith became associated, in 1896, with the office experiment stations, and later went to the Bureau of Plant Industry where he was put in charge of the section known as field studies and demonstrations, into which was placed the then beginning county agent work in Northern and Western States. In 1921 Doctor Smith became chief of the office of cooperative extension work.

Good Living and a Cash Income on Warren County (Miss.) Farms



HOME GARDENS on practically every farm in the county, well-filled pantry shelves displaying the canned produce of these gardens, 84 commercial poultry flocks, 284 farm flocks of more than 100 hens, and a curb market which brings in a goodly sum for the surplus garden and poultry products make Warren County, Miss., a fine place in which to farm and live. These advantages have come to Warren County during the last eight years with the development of home-demonstration work under the leadership of Mary Donney.

In February, 1924, when Miss Donney came to the county there was only one commercial poultry flock and no hatcheries. There were but 12 persons who were interested in making poultry pay and these organized the Warren County Poultry Association in April of that year. These demonstration flocks reported raising 6,754 chickens at a profit of \$3,829 the first year. During the next five years the poultry association members reported a profit on sales of eggs and birds of \$48,056. There are now three hatcheries and 84 farms where poultry is a major farming enterprise. Each of these farms raises more than 500 chickens each year. The number of farms having more than 100 hens is about 284. The interest in combating disease has resulted in the construction of approved brooder and laying houses on almost every farm in the county. The local market absorbs most of the eggs and fowls sold, and the price is unusually good. Standardization of eggs and packages has become an accepted practice.

The home-garden campaign was begun in 1924, and at that time many families bought all the fresh vegetables consumed in Vicksburg. At the present time only one farm home in the county reports no garden.

Curb Market Established

To aid in marketing the products of garden and poultry flocks, a curb market was established, sponsored by the local real estate board who obtained material from local lumber dealers to build sheds and supervised their building. Before the market was opened various meetings

There are many fine examples of home-demonstration work in the counties, examples which show the very tangible results in the lives and homes of the people when a well-planned program is carried on over a period of years. This story, the second in the Review's series, describes the success which rewarded the efforts of a capable and enthusiastic worker in a Mississippi county.

were held to discuss rules and regulations. The best methods of grading, standardizing, and marketing poultry and garden produce have been emphasized in the market until such methods are now the rule.

Another advantage of living in Warren County is the well-filled pantry shelves, showing a fine array of canned vegetables, fruits, and meat. When Miss Donney came to the county, five farm homes owned pressure cookers, and now more than 50 pressure cookers are owned in the county and are used to preserve vegetables and meats for the winter meals. In addition, large factory retorts, bought by the board of supervisors, were used by the home demonstration agent in four communities for those who did not own their own pressure cookers. A fifth factory retort was destroyed by fire which razed the school building two years ago.

The planning of the home-demonstration program in Warren County shows the real spirit of cooperation which exists between the farm women and Miss Donney. To decide just what should go into this program, two women from each community were chosen to serve on a committee. One of the two women represented a large landowner family, and the other, a tenant family. As far as possible women were chosen who had children at home. Thirty women were present when the meeting was called to order in the chamber of commerce committee room. A representative of the chamber of commerce had been invited to attend and was present for part of the discussion.

Homes Surveyed

A series of questions which had been mimeographed was distributed to the women. A blackboard was used for making notes during the discussion of each question. The first question was "What is the greatest need of the homes of your community?" The last one was

"Do you think the women of your community meeting once a month as a home-demonstration club can do much toward solving community problems?" The discussion brought to light the fact that most of the women did not know with accuracy the conditions in the homes about them. This resulted in each one agreeing to survey 10 homes in her community by a personal visit to each. A mimeographed form was distributed to be returned in two weeks for tabulating. Then the women met again and were surprised to find that what they had thought major problems were often minor ones. The ones occurring in as many as five communities were made minors, and those that were purely local were left to the solution of the local group. It was agreed that this program would be revised at the end of three years. The survey figures were graphed and supplied to the chamber of commerce, county board of supervisors, and others.

After eight years of successful work in Warren County, Miss., Miss Donney has been transferred to the State office where she is now tackling another big problem as food preservation specialist for Mississippi.

College 4-H Club Plans a Busy Program

About 50 members of the college 4-H club at Winthrop College, S. C., are in the midst of their season's activities, according to Lila Evans, interstate secretary. The 4-H loan fund already has about \$50, and the club plans are to offer a scholarship to club girls who wish to come to college next year, so that many plans for entertainments, lunches, and money-making schemes are under way. The club girls are preparing for leadership, and plan to assist their extension agents in every way possible. The club through Miss Evans asks for news of other college 4-H clubs and their plans for the coming year.

Cooperation in the Conduct of State-Wide Agricultural Programs

L. E. CALL

Director, Kansas Agricultural Experiment Station

THE DEVELOPMENT of agricultural policies is a recognized function of an agricultural college. The agency within the college that should take the leadership in the execution of this function has not been clearly defined, but the two agencies upon which this function would most naturally fall are the extension service and the experiment station. Which of these should assume leadership; should it be vested exclusively in one or the other of these agencies; or should it be a joint responsibility of both acting cooperatively, become important administrative questions.

They may not present a difficult problem at those institutions where the administrative responsibility for both agencies, extension and research, are vested in one individual, but in other institutions where this responsibility is divided, many difficulties can develop. The way in which the problem is solved has an important bearing upon the ability of the two agencies to work together and vitally affects the efficiency of both.

The problem is being handled with a reasonable degree of satisfaction at the Kansas State College. It was recognized at the start that the responsibility for the development of agricultural policies was a joint one between the extension service and the experiment station. The two agencies have worked in close cooperation in the development of all agricultural policies and in the planning and execution of all agricultural programs. The way in which the two agencies have cooperated may be illustrated by describing in some detail the plan of organization of the Kansas wheat-belt program, one of a number of agricultural programs organized by the college for the promotion of the agricultural welfare of the wheat belt of the State.

Wheat-Belt Program

The wheat-belt program took definite form and became a definite working program of the Kansas State Agricultural College in 1926. It had its beginning many years earlier, however, in the work of a number of research projects of the Kansas Agricultural Experiment Station. These projects supplied the basic information upon which the program was built. The results of three of these proj-

ects will be mentioned in the way of illustration. The first was the wheat tillage project started in 1907. This project proved conclusively that it was possible to increase the yield of wheat greatly by early and thorough preparation of the seed bed. The project supplied one of the essential facts upon which the wheat-belt program was built.

A second research project that contributed to the program was a study undertaken for the control of the Hessian fly. Date-of-seeding plots to determine the correct dates to plant wheat to escape the Hessian fly were started jointly by the entomologists and the agronomists of the station as early as 1907. As a result of this work, safe dates were determined for the seeding of wheat, both from the standpoint of escaping the Hessian fly and from the standpoint of maximum yields. A map of the State was prepared showing safe seeding dates for the crop in the different wheat sections.

Improved Wheat

A third station investigation that contributed to the program was the wheat-improvement project. As a result of this study, started in the early days of the experiment station, it was shown conclusively that the Turkey types of wheat more nearly meet the ecological requirements of Kansas than other types. Improved strains of this variety, such as Kanred, were developed. The experiment station became also a source of supply of pure seed of adapted varieties to be used as foundation stock by pure-seed growers. The advocacy of the use of pure seed of adapted varieties, therefore, became a definite part of the wheat-belt program.

In a similar manner other facts essential for the development of the program were discovered by station workers, such as methods for the control of smut, foot rot, and other wheat diseases, methods for the control of bindweed and other weeds, economical methods of farm organization, safe methods of combine harvesting, storing, and the like. Thus the foundation facts upon which the wheat-belt program was built were supplied by the experiment station.

Giving Facts to Farmers

The extension specialists on the other hand were developing technique for plac-

ing these facts in the possession of farmers. Their early efforts were more or less sporadic and not always successful. They did not always agree among themselves or with the experiment station workers regarding the best methods to be followed by the farmers or the best methods of taking the information to them. Frequently advice was contradictory in character when presented to the farmer by workers in different subject-matter fields even though based upon the best of experimental evidence. The need of cooperation and a unified program was clearly evident. It was this need, recognized by both extension and station workers, that supplied the stimulus for the setting up of the first 5-year wheat belt program in 1926.

As has already been stated the program was built upon facts secured through many years of experimental work. These facts were considered by committees in which subprojects for the program were planned. These subproject committees were usually headed by an extension specialist as chairman and were made up of extension specialists, experiment station workers, and county agents. After the subprojects were formulated, the committees meeting together determined how these subprojects should be coordinated into a unified program. After this tentative program was formulated it in turn was presented at a conference attended by extension representatives, experiment station workers, leading farmers of the wheat belt, and representatives of commercial enterprises interested in the wheat industry, such as railroads, grain men, millmen, and newspaper men. At this conference the tentative program was presented, amended where desirable, and a completed program adopted.

Program of the Institution

The execution of the program was the responsibility of the extension workers, but they were assisted by members of the staff of the experiment station with many special events, such as district schools, agricultural trains, tours, field days, and special meetings. The program, therefore, was neither an extension program nor an experiment station program but a program of the institution as a whole. It was planned cooperatively, executed cooperatively, and every member of the staff, whether in research

or extension, who was engaged in a line of work touched by the program, was personally interested in the success of it.

The procedure used in the formation and conduct of the wheat belt program has been following in the development of the legume program, the beef cattle program, the farm accounting program, and others for the betterment of agriculture conducted by the college. It has resulted in bringing about not only good cooperative relations between the station and extension workers but between the workers at the State college and the farmers and commercial interests of the State. While the spirit of cooperation results more from an attitude of mind than from a form of organization yet much may be done to organize work in such a way as to promote the spirit of cooperation. This has been done with a reasonable degree of success in the development of agricultural programs at the Kansas State College.

4-H Club Boys Form Cooperative

A 4-H club crotalaria association was organized by the 30 crotalaria club members of Union and Bradford Counties, Fla., reports County Agent L. T. Dyer. Crotalaria is a summer legume introduced in Florida during recent years which is proving very successful as a soil builder.

The boys each grew an acre of crotalaria last season and now all of them have about 12,000 pounds of seed to sell. This seed will be recleaned, pooled, and sold by the association at 3 cents per pound; 2 cents for actual expenses and 1 cent for the treasury.

Regular officers and an adult advisory committee, composed of parents of three of the boys, were elected and a constitution accepted. The purpose of the association, as set forth in the preamble, is to further the growing of crotalaria in the two counties and to sell seed for its members.

"At least 50 farmers in the two counties have already said that they expect to buy seed from the association this year," Mr. Dyer said.

This spring each boy will plant another acre of crotalaria and plant corn on last year's crotalaria acre.

THRIFFT, in the form of thorough utilization of all available food, clothing, and household supplies, has been the guiding thought of North Dakota Home-makers' clubs during the past year, Grace DeLong, State home demonstration leader, states.

Michigan County Agent Finds a Way

ONE OF THE first problems confronting Ralph Trafelet, county agricultural agent, when he took up his duties in Osceola County, Mich., was to work out a soils-improvement program to raise the fertility of soils which were yielding less than the average produced by central Michigan counties on practically all crops.

An increase in the acreage of legumes was one of the first requirements of a soils-building program, but most of the soils were too sour to grow alfalfa without an application of some form of lime before the legume was seeded. Farmers

Setting the price for the marl in the stock piles and obtaining orders from farmers for the soil sweetener were next in order. With these details attended to, the excavator moved into the first pit and the first stock pile of marl was soon awaiting removal to prospective alfalfa fields.

Mr. Trafelet's annual report for 1930 states, "Nine beds approximating 15,000 to 18,000 yards of marl were dug at a cost of from 3.5 to 14 cents per yard. One cooperative digging association was formed with 15 men paying cash for 1,000 yards at 2.8 cents per yard. About 6,000



This machine, located in Osceola County, Mich., has dug 34,000 yards of marl since April, 1930

who were interested in growing alfalfa stated that they could not buy lime to apply to their fields.

The county agricultural agent located several fine beds of marl, but the farmers lacked equipment to excavate the material and were reluctant to make any investments in expensive machinery. The soils-improvement program seemed to be hopelessly bogged down.

Equipment Borrowed

About that time, Mr. Trafelet noticed an idle excavating outfit mounted on a caterpillar tractor and owned by the county road commission. A visit to the county road commissioners yielded the information that the highway officers would loan the equipment for digging marl if the owners of the marl beds would sell the material, after excavation, at a reasonable price.

out of the 15,000 yards dug this year have been spread on 1,000 acres of soil."

To prove that this marl-digging project was not in the one-night-stand class, the report of the county agent in Osceola County for 1931 says that in 1931, 10 beds were dug by this excavating shovel. According to a story in The Grand Rapids Herald, farmers in Osceola County have saved \$12,000 during the past year by the county extension agent introducing this method of marl digging. At the present time, approximately 19,000 yards have been dug and a large percentage has been sold.

OVER a 10-year period South Carolina 4-H clubsters have averaged 39 bushels of corn per acre while the State average is only 15 bushels per acre, says Theo Vaughan, assistant State boys' club agent.

Louisiana Agent Attacks the Pasture and Feed Problem



THE PROBLEM of building a pasture in this parish can not be appreciated unless you can picture a soil which is as

nearly depleted of all plant food and organic matter as it is possible to deplete a soil by growing cotton on it for 20 to 30 years without a winter cover crop. The unterraced hillside with gullies across it was the type of soil on which I attempted to demonstrate pasture building. I was informed by good authority that it was impossible, but it was clear to me that if this was impossible then dairying in Claiborne Parish was impossible, because most of the land is just such hills. I do not want to give the impression that they are all washed away, but the farmers of this section would not think of devoting their best land to pastures.

Clovers and most of the grasses will make a fair growth on the hill soil in late winter and spring but during the summer they will burn over. This brought up another problem which is being met by planting Dallis grass. Dallis grass seed has a very low germination and are exceedingly high in price so I am urging the farmers to dig up the plants along the roadside and transplant to the pasture. All of the roads here are lined with the grass and one bunch will make several cuttings or plants.

Feed Problem

The feed problem has given me about as much trouble as that of pasture building. The 2-year drought and a depleted soil brought about an unfavorable reaction toward feed on the part of many farmers. I contended, and still contend, that with ordinary market prices, unless a farmer produces his own feed it is best for him to forget about dairying in any of its forms. I am glad to see that most of the farmers here are taking that attitude and are realizing something aside from work out of their dairy cows.

I have secured a general adoption of planting soybeans, cowpeas, velvet beans, and oats or rye for winter grazing by most farm dairymen. Some of the farmers pick the peas or beans and crush them for their concentrates. Cottonseed is exchanged for cottonseed meal or is fed to the cattle. When it becomes nec-

Claiborne Parish, La., is working on a dairy-development program. The present agent, Brodie Pugh, started work in 1929, following C. W. Davis, who had organized a bull association of 25 members, brought in 30 cows of fair breeding, and had negotiations under way for a cooperative creamery. With this beginning, County Agent Pugh decided the next big step must be an improvement in the pastures and the production of home-grown feeds. In the following article he tells in his own words how he went about it.

essary to buy feed, I recommend buying the materials and mixing their own feed at home. The soybeans supply plenty of hay when at least 1 acre per cow is planted. Cowpeas are used for hay as well as lespedeza. Lespedeza is not generally successful due to not standing the summer droughts.

Silos Built

I started a silo program this year which has been successful, but I did not reach my goal. I planned to put in 25 trench silos but was able to get only 18 in this year. Failure to reach my goal was due to inferior seed and a drought in one section of the parish. The 18 silos have a capacity of 806 tons. I realize that this is a small tonnage for a parish to put up, but last year there was not a farmer who saved a ton of silage.

The saving of silage is new to all our farmers and naturally they are slow to try out a new idea on an extensive scale. This is especially true when they are putting the silage in a trench silo. To start with, there was not a cutter in the parish and the farmers were not able to buy one. I met the problem by going before the police jury of this parish and asking them to buy a cutter for filling the first silos. The body bought the cutter and made a charge of \$5 per day for the use of the machinery. I had the cutter mounted on an auto trailer so that I could attach it to my car and move it from farm to farm. I had two ideas in view: First, to secure the machinery for filling the silos, and second, to have a good excuse to make the farmers wait until I could supervise filling the silos. This being a new demonstration, I was especially anxious for every silo to be a success.

Work Organized

Filling silos was organized on a community basis. The Summerfield community was the outstanding community in this parish. There were eight silos filled in the community, and every man was on the job until the last silo was

filled. I have never seen a better spirit of cooperation demonstrated in my life. The farmers were not used to that type of work and the second day they complained about being sore, but they all took it good-naturedly and continued the work.

Some of the silos were filled with corn and velvetbeans, but most of them were filled with sorghum, Texas seeded ribbon and hone drip being the two varieties used. Corn will not make tonnage enough per acre here to justify a farmer to depend on corn alone for filling a silo.

One farmer who filled two of the trench silos is going to keep one of them for feeding next summer when his pasture gets short, and the other one will be used for winter feeding. This will supply succulent feed during the short pasture periods.

One of the best proofs of the value of dairy cattle to a cotton farmer was brought out last year when I made a drought relief survey of the whole parish. The survey showed that of every 100 farmers who had 6 cows or more only 35 wanted Government assistance. Of every 100 farmers who did not own 6 cows or more 95 called for immediate relief, and they needed all the relief they asked for. This fact proved to many cotton farmers that they needed cows on their farms, and they have made every effort possible to secure cows.

THE EXHIBIT of the United States Department of Agriculture at the south Florida fair, February 2-13, featured honey and egg production, increased incomes through standardization of dairy products, better practices in egg production, the food required for healthy growth in children, and the feeds required for fattening steers. Other subjects included were the control of flies, hog cholera, farm and woods fires, fertilizer values, and an exhibit showing enrollment of the 4-H clubs by States.

The Washington Cooperative Egg and Poultry Association

EFFICIENT marketing brings the producer and the consumer closer together. Poultry men in Washington are 8 cents a dozen closer to the New York consumer than they were in 1921. The Washington Cooperative Egg and Poultry Association has been the biggest

States also had enough. The Middle West had more than enough. The people who would eat the surplus eggs lived in New York, and there the eggs must go.

In February, 1917, a small group of poultry men met in Seattle to discuss their problem of marketing. The meeting

The association now ships a carload of eggs every working hour of every working day. In 1922 it shipped 361 cars. In 1930 it shipped 2,156 cars. This is export business only and takes no account of eggs sold in Seattle, Tacoma, and other local cities and towns.

The association started with one station in Seattle in April, 1917. The second station, Winlock, opened May 20, 1920. Then followed Bellingham, August 10; Lynden, August 12; and Tacoma, August 17; all in 1920. It now has 23 receiving stations, 16 of them being candling and grading stations. These stations cover all of western Washington and three points in eastern Washington.

The association is spending about 15 cents a case, one-half cent a dozen, in the special preparation of eggs for



(Top.) Cooperative general office building in Seattle.

(Below.) Cooperative truck and trailer of a fleet of 120 trucks.

(Right.) Packing eggs in cartons for local consumption.

factor in bringing this about, writes W. D. Buchanan, extension poultry man. The story of its organization, management, and financing is a record of efficiency.

The association was organized in 1917. The years 1916 and 1917 had brought a crisis to the poultry men of Washington. The State was sparsely settled but even so the farmers had not been producing enough eggs for the population. As late as 1916, 167 cars of eggs were shipped into the State to satisfy the local demand but suddenly there were more eggs than the people would eat. Other adjoining

resulted in the organization of the Washington Cooperative Egg and Poultry Association.

Financial Plan

The plan for financing the association is simple. Each member pays into the association a sum equal to 2 cents a hen, but never less than \$5. In addition the association deducts 1 cent from the sale price of each dozen eggs sold and adds this to the capital stock of the member. That is all there is to the plan. It has never been changed except in the financing of the feed department.

the trade that it did not spend 10 years ago, yet its total costs are lower than they were 10 years ago. The cost per case was \$1.15 in 1929 as compared to \$1.13 in 1923.

The cooperative association has more than one iron in the fire. Organized originally to market eggs it has gradually assumed other duties associated with the business of producing eggs. Its attention to these varied details has helped its members to weather the financial depression of 1930 and 1931. The following

(Continued on page 24)

Kansas 4-H Camp Studies the Farm Business

ADIRECTED study of the farm business was the principal interest of 75 4-H club members encamped at Crystal Springs, Rawlings County, Kans., last summer. They learned how to buy and sell commodities, and how to keep an accurate record of these same transactions in the regulation farm account book. This work occupied from four to five hours of the day.

Each camper was given an inventory from a regular farm business to enter in his farm account book in the proper form and place. Then a regular schedule of business transactions for the first three months of 1930 was studied.

Business Transactions

Each one figured out how much his eggs, butterfat, and hogs were worth at current prices. He then went to the Hikeville store or elevator, established in camp, and sold his products. He bought gas at the Hikeville filling station for his auto and tractor. He bought shorts, bran, and other feeds at the Hikeville

Farmers' Elevator and paid for these necessities with a properly written check drawn on the Hikeville State Bank, in which he had already deposited his surplus cash. He sold his wheat at the elevator, taking in return a check which he deposited at once.

Every check was scrutinized very carefully, and any inaccuracy or improperly written checks were corrected before the purchase or the deposit could be made. Finally, the facts of the whole transaction were written in the proper place in the farm account book.

After the sales and purchases were all made and the entries written in the record, the second inventory, including the value of buildings, machinery, feed, supplies, and livestock, was entered.

Then came the making of the final summary, or the balance sheet. These 4-H'ers were now farm business men and women, closing a year's business on their own respective farms, figuring up and charging off the depreciation, and learn-

ing to take their losses as well as their gains.

The camp was comprised of 4-H club members from Sherman, Cheyenne, and Rawlins Counties. It was held under the direction of County Agent D. M. Howard of Sherman County, County Agent H. J. Stewart of Cheyenne County, and County Agent R. W. Stumbo and Home Demonstration Agent Esther M. Huyck of Rawlins County.

NATIONAL 4-H CLUB RADIO PROGRAM

Saturday, March 5

My purebred dairy calf makes good. By club boy.

Standardizing 4-H products. By club girl.

What we parents think of club work. By 4-H parent.

What's going on in the 4-H clubs. By Department of Agriculture staff member.

America's hymns and religious songs.

Lead, Kindly Light _____ Dykes.

The Little Brown Church in the Vale _____ Pitts.

The Holy City _____ Weatherly-Adams.

The Old Rugged Cross _____ Bennard.

The Son of God Goes Forth to War _____ Cutler.

God Be With You _____ Tomer.

Nearer My God to Thee _____ Mason.

Elli, Elli _____ Katz.

Washington Cooperative Egg and Poultry Association

(Continued from page 28)

table shows the importance of the various activities:

Department sales, 1930

Egg department	\$11,193,080.08
Egg meats department	364,403.41
Poultry department	740,672.02
Poultry cannery	224,820.43
Feed manufacture sales	15,252.70
Feed department	7,897,869.26
Total sales	20,436,097.90

The financing of the feed department illustrates a real value in cooperative marketing. Starting with no funds available for this department the association at first borrowed from the egg department. These funds have since replenished from profits on the sale of feed. The plan from the beginning was to sell good feed at a fair market price. No attempt was made to undersell independent dealers, although in some cases the independents brought down the price of their feed. The association has refused to follow a competitive market up and down, but has rather tried to run on a basis that would allow independent dealers a fair profit. The membersulti-

mately get the feed at cost. Any surplus or profit resulting from over charges is returned to them in the form of preferred stock, drawing 8 per cent interest. The money representing this stock now amounts to \$1,802,492.24. The feed profits returned to the members yearly amounts to a sum varying from \$2 to \$4 a ton. The feed department distributed 181,830 tons of feed to the members during 1930.

The following table shows how both producers and consumers have benefited from increased efficiency in the association's operations.

	1921	1928
Consumers' purchase price	\$58.35	\$47.25
Producers received	\$33.30	\$30.08
Spread between consumer and producer	\$25.05	\$17.37
Producers' per cent of consumers' dollar	57.08	63.39

The extension service has cooperated closely with the association ever since its inception. Several county agents assisted in the organization of the poultry cooperative by acting in an advisory capacity. While the organization is a centralized set-up, a large number of local

poultry educational associations have been organized by county agents. These served to strengthen the morale of the organization, keep the members posted on poultry production and the operation of the association.

Extension service specialists have been in close contact with officers and branch managers of the cooperative for the past 12 years. The extension poultry man was a member of a college committee on feeds last spring, which resulted in the adoption of Washington State College ration formulas for the preparation of the prepared poultry feeds sold by the cooperative. Extensive use of various poultry bulletins has also been made through the organization.

The association officials are cooperating with the extension service this year in making a success of the annual poultry schools, 18 of which are being held this winter. Several county agents are working with the cooperative in conducting better egg campaigns.

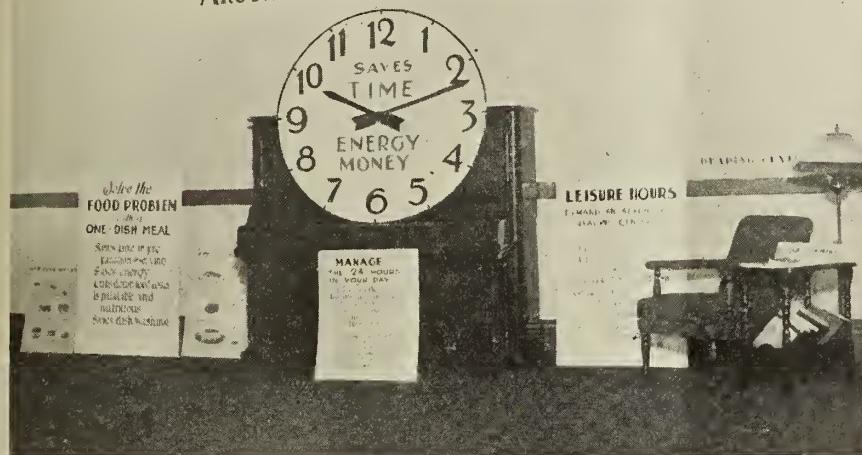
ACOLORADO State organization of home-demonstration clubs was recently formed at a meeting in Denver attended by women representing 18 counties.

Wyoming Achievement Days for Adults

MARY COLLOPY

State Home Demonstration Leader, Wyoming Extension Service

AROUND the CLOCK with the HOME MAKER



A home management display at a county achievement day in Laramie County, Wyo.

IF INTEREST in home demonstration work can be measured through achievement days, Wyoming has just cause for gratitude this year. In 8 of the 9 counties having home demonstration agents, and in 1 of the 11 counties having county agents, achievement days were featured during October and November with an average attendance of 2,081 adults. To those families with the vast distances and scattered population of the West this figure will not seem small. It will bring quickly to mind the picture of almost 3,000 interested wives (and often husbands) leaving the morning work finished and driving from 25 to 100 miles with their exhibits, their share of the noon lunch, and their children to participate in the crowning event of their extension club year.

For Wyoming county agents this number holds greater interest when they recall that 16 county-wide clothing project achievement days, featuring style revues, were held during the summer months of this year with a total attendance of 1,851.

Mornings have been devoted to the work of exhibits. In some counties a short business meeting of the county extension advisory council has been held before lunch. Games supervised by recreation project leaders have proved popular with those not in the council meeting.

During the noon hour ample opportunity is afforded for all to view the exhibits. In a few counties potato shows

arranged on the same day by the county agent have brought a large number of husbands to see the exhibits.

The county chairman is in charge of the afternoon program which is composed of stunts, songs, and reports featuring one of the projects. Music project leaders give short demonstrations of music-appreciation work.

This year a special effort has been made to have one or more county commissioners appear on the program. In one county in which rumblings of discontinuing the appropriation had been heard the three commissioners were made honor guests at the luncheon and each made a brief talk emphasizing his surprise and pleasure at the scope of the work reflected in the noncompetitive exhibits, charts, and the program.

Thrift Ideas in Exhibits

In keeping with the needs of the hour many thrift exhibits have been arranged this year. In connection with the meat-canning work in Goshen County an exhibit was arranged to show the money saved by canning beef instead of selling at the present low price. "This Little Cow Stayed at Home" was the clever caption used in this booth. A clear-cut chart showing in figures the butcher's profit attracted attention.

The evolution of canning methods arranged on four steps was the basis of another clever exhibit showing progress made since the days great-grandmother sealed her preserves in the stone jar.

Dried vegetables and yeast were prominent in this booth as well as wild and domestic meat canned by a daughter in 4-H club work.

Beauty Not Forgotten

Gratifying indeed have been the large number of splendid home-beautification exhibits arranged especially in eastern Wyoming counties where trees are few and far between. Many of these booths have portrayed the contrast between the unkempt yard with no trees or shrubs and the neatly kept yard well planted with native shrubs and drought-resistant trees.

Clothing exhibits have fairly shouted a challenge in their displays of two dresses, one ready-made and one homemade which have been worn the same length of time by volunteer home demonstrators. Home sewing proves its point beside the faded bargain dress.

The home management project, given new impetus this year by the advent of Wyoming's first home-management specialist, has been reflected in clever playlets, stunts, and exhibits portraying time and energy-saving ideas, home accounts, and goals in home making.

Awards Are Made

Awards are made at the close of the afternoon program. Prizes are awarded in the following competitions:

1. Best club secretary book.
2. Club having largest number of 100 per cent local leaders present.
3. Club having largest number of points. (Base on score card for attendance activities, practices adopted, and the like.)
4. Best essay on value of a project.
5. Certificates bearing the seal of the University of Wyoming are given each woman attending all club meetings during the year and to all women completing the meal-planning contests.
6. In some counties recognition is given to those who have traveled more than 100 miles to attend.

It would be unfair to conclude a story of Wyoming achievement days without emphasizing the fact that the social feature is vastly more important than in States more densely populated. The contact with "neighbors" who live 35 miles away is decidedly pleasing to Wyoming women. Incidentally, the home demonstration agent gains a score by watching the dissolution of community lines and the birth of county-wide viewpoints on this big day.

Kaw Valley Develops Potato Industry

"PROFIT in the potato industry depends, first upon reducing the cost of production per unit, and second, upon receiving a higher price for the products grown, and these were the two points considered in the program for the Kaw Valley potato growers started more than 10 years ago," says Frank Blecha, district agent in the Kansas Extension Service.

Lowering the cost of a unit was a major production problem, and this the growers of the Kaw Valley accomplished by controlling the potato diseases and by employing better methods of cultivation. Their yield was tremendously increased per unit of land. At the end of the 5-year period, the figures of the Kansas State Board of Agriculture showed that the yield of potatoes was increased, on an average, 38 bushels per acre.

The second problem in the potato industry was that of marketing, and that phase entailed the problems of standardization, the use of branded packages, and finally the problem of distribution.

The proper distribution of the product meant centralized control, and centralized control meant a growers' marketing association.

Standardizing the Product

The marketing phase of the program was begun in 1924 with the standardization of the product. Before this potatoes were dug and gathered in baskets by boys from neighboring towns and cities, and sometimes big potatoes, little potatoes, rotten potatoes, and knobby potatoes were in the same pack.

Unfortunately, too many cars of these inferior potatoes worked their way into the market without being detected. The Kaw Valley potatoes fell into disrepute in the trade channels of the United States. Initial sales were not bringing repeat orders. Potato growers that were standardizing their product were "out selling" the Kaw Valley growers.

Grading Potatoes

In 1924, the whole situation was presented to the growers of Shawnee County by the extension division, and these growers voluntarily adopted the Federal grading rules. The growers requested the Federal Government to send inspectors to place the grade on every carload that was shipped out of this particular county. A comparison of prices received in Shawnee County with surrounding counties that did not have inspection service showed that the

graded potatoes received an average of 17 cents per 100 pounds more than field-run potatoes grown in adjoining counties.

This did not escape the potato growers in other counties, who demanded that their potatoes also be inspected. The result was a compulsory State grading law, effective during the time the commercial potato men are marketing their products. It has now been in effect for five years, and the benefits of this law are more and more apparent to the growers of Kansas each year.

Cooperative Marketing

After the inspection service was secured, the last step, that of cooperative marketing, was attempted. There were many dealers handling the Kaw Valley potatoes prior to 1928, and each dealer shipped the potatoes wherever he pleased. Sometimes these dealers sent several cars of their potatoes to the Chicago market on the same day. Other producing sections would do the same, thereby flooding the Chicago market.

Studies conducted at the college showed that the Chicago price of potatoes governed the prices paid for potatoes in other sections of the country. Chicago might be flooded, but on the other hand Denver, Colo., or San Antonio, Tex., might be in great need of potatoes but it would be impossible to get the old price at Denver or San Antonio if the Chicago price had been lowered. This condition could be remedied only by having centralized control.

The first attempt at cooperative marketing of Kaw Valley potatoes in 1929 failed because there was an insufficient number of signatures to the marketing agreement to make the plan effective.

However, the next year, early in 1930, with the cooperation of the Federal Farm Board a plan was outlined whereby the potato growers of the Kaw Valley could receive the benefits of cooperative marketing.

The grower signed a continuous marketing agreement, which allowed him to withdraw from the association for the following year by giving notice any time during the first two weeks in the preceding December. The association establishes a daily pool for the various grades of potatoes sold. Each grower producing a given grade gets the average price of that grade for that day. As Mr. Blecha explains it, "Suppose 50 car loads of potatoes of a definite grade are delivered on a certain day. The destinations of some of the cars are to far points while others are to extremely close ones. The latter will, therefore, usually net more than those going to a distance and are delivered with much less hazard. In order that there may be no dispute as to the destination of each car, a daily pool is established. The grower, according to the contract, is to receive approximately 75 per cent of the value of the potatoes when they are loaded on the car." A commercial firm was secured to sell the potatoes at \$15 a car.

About 61 per cent of the car-lot tonnage was handled through the association. The potatoes were not sent to larger centers, there to be redistributed, but were sent directly to the points where the potatoes were actually consumed. The association was a dominant factor in quoting prices. While the advantages of this can not be definitely proved, the members of the association and business men in general realized fully the advantage they had through the association.



A practical method of treating potatoes with corrosive sublimate

Professional Improvement for Extension Workers

C. B. SMITH

Assistant Director of Extension Work, United States Department of Agriculture

EXTENSION workers have manifold responsibilities and problems. Extension work is a profession which calls for many diverse skills, aptitudes, experiences, and knowledges. Extension agents, specialists, or supervisors must assume many different rôles every day. They play the parts of office manager, farm or home advisor, leader of rural youth, investigator, analyst, demonstrator, reporter, speaker, news writer, teacher, organizer, leader of the many forces which work for a more profitable and satisfying country life.

New problems are put before extension workers constantly. The objectives and ideals in extension work are becoming broader and deeper. Programs of work are growing larger in diversity and content. New fields of subject matter must be explored and understood. New teaching agencies, new means and agencies need to be employed. Modern principles of education and teaching procedure should be applied.

How can the extension worker keep abreast? How can he meet the manifold problems successfully? How may he do the work with less strain? How can he make his leadership in rural betterment more result bringing? Every new problem, every changing situation, every advance depends upon new knowledge and new ways of using knowledge.

What Will Help Most?

The solutions to these problems may be obtained through planned and supervised study, through purposeful professional improvement. Few indeed are the extension workers who do not recognize this need. Many long for a chance to learn new facts, new ways, and means of doing the job better. They realize that they did not always select work in college which would fit them specifically for extension work. The subject matter knowledge gleaned in college was fundamental of course. But methods of procedure in solving extension problems were probably not gained there. Besides it is some time since college days. New knowledge is necessary. Why not go to college again? Why put off getting the needed additional training? The individual's pride in extension work as a career will grow as he gets down to systematic preparation and skilled fitting for

that career. His satisfaction with his work will increase. The results he will obtain as a worker in the field of farm and home improvement likewise will grow. Moreover, the additional training and the larger successes he may win should prepare him for other responsibilities. Eventually, special training and fitness will be given full weight when advances and promotions are made.

Special Summer Courses

The opportunities for obtaining special training are multiplying. Several colleges now offer special courses for extension workers. These courses are on a graduate level, and credit toward a graduate degree may be obtained. Wisconsin and Cornell Universities offer such courses regularly every summer. Ohio State University has conducted two courses of this nature. Six weeks, the regular summer school session, are involved. The Utah Agricultural College last summer conducted a two weeks' graduate school for extension workers. The Oregon Agricultural College conducted a course during the summer of 1931 for home-demonstration workers. The Louisiana State University will conduct graduate extension courses for three weeks during the summer of 1932.

Various offerings and opportunities are listed in the summer courses. Cornell University gives:

1. Educational psychology for extension workers.
2. Educational philosophy for extension workers.
3. Organization and administration of cooperative extension work in agriculture and home economics.
4. Method in teaching in cooperative extension work.

Each of these courses allows two credit hours.

Wisconsin University, where special extension courses have been given for the last three summers, offered the following courses during the summer of 1931:

Agricultural education 110, extension methods, lectures and discussions, three credits.

Agricultural education 175, applied extension methods 175, two credits.

Agricultural extension 142, administration and supervision of extension, two credits.

Home economics 126, problems in home economics extension, two credits.

Agricultural education 103, extension research, credit to be arranged.

Agricultural journalism 140, writing for extension workers, two credits.

The extension agent who attends such summer schools has the opportunity to elect other courses in the regular summer-school courses which present a wide range. Courses are open in agricultural economics, including marketing, farm management, rural social organization, home economics, rural education, psychology, as well as the typical agricultural and arts and science courses.

Study Brings Satisfaction

An increasing number of extension agents, supervisors, and specialists now leave the work to carry on graduate studies during the regular college year. In many cases this is possible because the States have extended to their extension staff the same privileges of sabbatical leave which have been enjoyed by the resident staffs. The following States have provided some form of sabbatical leave: Arizona, California, Kentucky, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Utah, Wisconsin, and Wyoming, and the Territory of Hawaii. Meanwhile, the deans of the agricultural colleges and directors of extension in other States are seeking to develop similar opportunities for their extension staffs. The first beginnings have been made in some States where individuals whose work has shown special merit are allowed leave, while in other States leave on pay for short periods is allowed, as for attendance at summer-school sessions.

TO DATE THIS YEAR five Colorado farmers have won memberships in the 600-bushel club. The first to win the honor this season was John Gredig, of Rio Grande County, who set a new world record for Bliss Triumph potato production, with 1,069.06 bushels to an acre. Each of these five large yields has been made in spite of a generally unfavorable season in Colorado.

Cost Analysis Exposes Leaks

SIX YEARS ago a representative group of citrus growers in the citrus department of the Orange County (Calif.) Farm Bureau started a cooperative project with the agricultural extension service to study the cost of producing Valencia oranges, says Harold E. Wahlberg, farm adviser in Orange County. The prices of oranges and returns to the grower were comparatively high, and the urge to analyze costs of production was not pronounced; but the extension service at the time was engaged in an educational program of demonstrations and field meetings for the conservative use of irrigation water in the citrus orchard. Investigations had revealed that many growers were using excessive amounts of irrigation water not only to the detriment of their trees, as reflected in lessened production and quality of fruit, but also apparent in excessive water bills and in the general receding of the water tables that furnish the bulk of the water for the citrus area in Orange County.

This new project, involving the segregation of all costs incurred in the production of oranges, immediately appealed as an important means for studying the effect of heavy irrigation practice on citrus production and income. So the project started in January, 1926.

Seventy-five cooperators have been submitting their itemized cost reports month by month and completed the 5-year summary last year. The original draft of the project contemplated a 5-year study and analysis of the business of growing Valencia oranges, but upon its completion last January the cooperators were unanimously agreed that their enterprise efficiency study should continue, inasmuch as a new economic period was upon them. The 5-year period then completed reflected costs and returns during an era of prosperity. The next five years they said, in view of declining trends, may tell a different story, so now we're in the sixth year of cost analysis. It is designed primarily to assist the individual grower to analyze the various costs involved in his production operations in comparison with other orchards and groups of orchards and help him direct his operations toward great efficiency of the dollar expended.

The Irrigation Picture

To get right into the heart of the thing, let us see what these 75 growers contributed toward the knowledge of irrigation practice from an economic stand-

point. In 1927 the low-profit orchards used 20.2 acre-inches of irrigation water per acre in five irrigations, and produced 138 packed boxes per acre. The high-profit orchards used 16.4 acre-inches in four irrigations and yielded 360 packed boxes per acre. The average ages of the two groups were 14 and 20 years, respectively, which would naturally affect the production, but the data show that 20-year-old trees did well on 16 acre-inches that year and that the low-profit orchards could have saved an average of 4 acre-inches, or approximately \$4 per acre for water alone. In addition, the cost of extra furrowing out and cultivation, which averaged \$2.44 and \$2.90 per acre, respectively, could have been saved.

The records for the next three years tell a similar story. The bulk of the economic evidence submitted by these growers indicates that profitable orange production is fundamentally dependent upon the availability of irrigation water in this arid country and that its use must not be abused. The optimum range of usage for Orange County appears to be from 16 to 20 acre-inches, depending on the age and size of the trees.

Less Cultivation Pays

The extension service spent many hours and days urging the reduction of cultivation expense, but not until the cost records were available was the proposition clinched in the average grower's mind. The efficiency study has revealed each year that there is no correlation between cultivation and returns or yield.

Cultivation costs for all orchards ranged from \$5.68 per acre to \$64.37 per acre. The 10 orchards reporting highest profit averaged \$18.71 in cultivation cost. There are many large and small operators in Orange County who have reduced their cultivation costs 50 per cent or more in the past five years. About 25 per cent of the orchards in this study report higher cultivation costs than the \$18.71 per acre for the most profitable orchards.

Fertilizer Leaks

Fertilization of citrus trees is essential to normal growth and production. The cost reports revealed a wide range of expenditures for this item. Some growers spent as high as \$175 per acre for fertilizer and some less than \$5 per acre. The experience tables for the 5-year period indicate that the upper figure represents a big leak in the production program, while the lower figure provides too meager a ration for normal growth. The

most profitable orchards spent during the five years an average of \$69.95 each year for fertilizer materials. Thirty per cent of the growers spent over \$70 per acre for fertilizers. Savings up to \$105 per acre can be made by these growers in this item alone, Mr. Wahlberg points out, and with the lower cost of nitrogen, organic matter, and other elements now the fertilizer expenditures may be materially cut under the above average for the most profitable groves.

Future Costs and Returns

"In this way," says Mr. Wahlberg, "the individual grower may analyze his own business and intelligently adjust his costs to meet the lowering trend of commodity prices." Commenting further, Mr. Wahlberg says: "The increasing planting and production of citrus fruits in this country and foreign areas will depress price trends. The grower who applies an efficiency analysis to his production business and thereby disposes of unprofitable trees and practices will be able to weather market conditions that may sink the grower who can not produce fruit cheaply."

Arkansas Women Study Clothing

In 816 home-demonstration clubs in Arkansas 8,443 women are studying and working on clothing projects. These projects included care of clothing, selection of all the clothing for the entire family, construction, costume design, millinery, special work in planning the layette, and special work this year in remodeling and home cleaning.

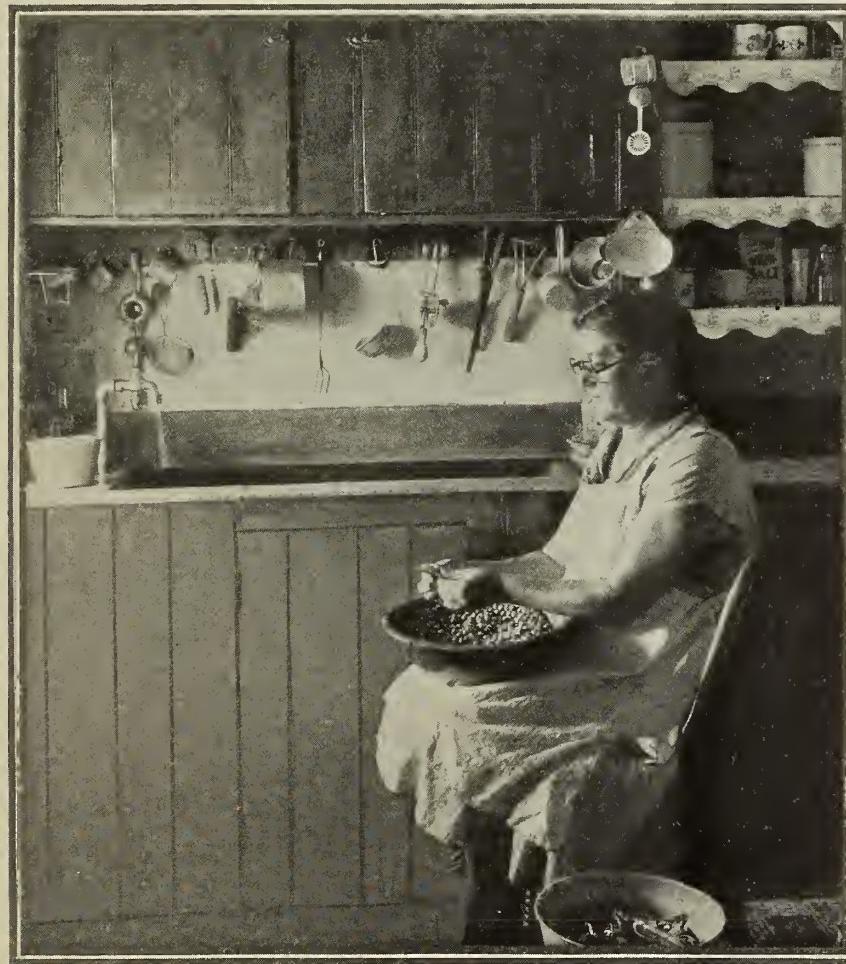
"Clothes clinics" both in county and community centers have been held as a means of training women to help themselves and their families by restoring clothing and hats to up-to-date usefulness. Thirty-seven training demonstrations have been given to local leaders and club women who wished to improve their methods by Rosalie L. Wolfe, Arkansas extension specialist in clothing and household arts.

ABOUT ONE-TENTH OF MISSOURI local 4-H club leaders had been members of 4-H clubs themselves, and 49 per cent of these were leading clubs of the same project as that to which they had belonged, according to a leadership study based on questionnaires filled out by 613 club leaders in 1928.

Satisfying Living Sought

TWO projects carried on in Washington County, Me., are doing much to promote satisfying rural living in that county. The balanced community meals project was started in 1927 and has been gathering impetus ever since, while the campaign to put running water into the

munity meals using an approved form of table service. Seventeen communities carried the project in contest form in 1927, serving 110 meals to 1,866 people. In 1930, the project was carried with almost as much zest as in 1927. Approved meals numbering 101 were served to 1,507



Before the water was piped from a well it was necessary for this woman to carry water down a hill

homes of the county was off to a good start last year.

A community meal in Washington County, Me., may contain baked beans and brown bread, but you can gamble it also contains other health-giving foods, to make it a "Square meal for health." Vegetables and fruits along with only one kind of dessert have forced the traditional New England baked bean over to one side of the seat.

Community Meals Improved

The project "Square meals for health" was introduced by Katherine Dennison, then home demonstration agent, to encourage the serving of well-balanced com-

people. New interest was aroused this year when the contest was changed from a State to a county basis.

There is little doubt that the "Square meals for health" project has left its mark in Washington County. Everywhere you hear, "It's a square meal for health." Folks who have used this practice so many times at extension meetings have a feeling that something is horribly wrong when they have suppers or go to suppers where everything is served too abundantly and promiscuously.

Washington County folks and representatives of the extension service have also been working upon a survey of water facilities within the rural homes

which reveals that 36.1 per cent of the families carry water 126 feet; 22 per cent pull water from a well without the use of a pump, while 16.2 per cent have running water in the house. Clearly this is a problem which is worthy of the best efforts of all concerned.

The work on the project was begun in 1930 when G. W. Ackerman, staff photographer for the Office of Cooperative Extension Work, Washington, D. C., assisted the extension agents in taking a series of pictures showing the actual conditions as they relate to the water facilities in the rural homes in the county, from the simplest to the complete modern pressure types. These pictures were made up into a film strip with charts and diagrams to show how the various systems could be installed, which proved very useful in community meetings.

Newspapers Aid Project

A definite program of publicity through the press was outlined and used. This included announcements of meetings where the film strips would be shown and stories by folks in the county enjoying successful water systems. A newspaper mat was used in many papers to illustrate some of the systems. A story accompanying this mat carried the following head: Let Water Do the Running, Maine Farm Women Say.

These various extension methods have created an interest in better water facilities in Washington County and have assisted the county extension agents in compiling a definite prospect list of those who are interested. In this present year the agricultural engineer is working with the home-management specialist and the home-demonstration agent in developing plans with rural home owners who are on this prospect list. Actual installation of systems, adapted to the conditions and needs of rural families, will be started next year.

A TRADE OF CAROLINA pecans for Florida Crotalaria seed was made recently with the aid of County Agent J. J. Heard, of De Soto County, Fla. The South Carolina farmers had some pecans which they wished to sell. The De Soto County growers had some seed of Crotalaria, a new leguminous summer cover-crop plant which is especially desirable for planting in orchards, groves, and vineyards.

"We'll swap you some pecans for some Crotalaria seed, pound for pound," said the South Carolinians. "It's a bargain," said the De Soto farmers, and so the trade was made.

The Month's Best News Story

Rightly or wrongly, we give the palm this month to F. W. Hoepfner, Nueces County, Tex. He deals with an important crop and a piece of work important to his county. It's a follow-up story on the results of a fall clean-up campaign to reduce boll-weevil infestation. There were many good stories submitted. This one, though, is an unusually good example of the type of follow-up story that is often overlooked. During a clean-up campaign it is easy to maintain a steady flow of progress stories. It is mopping up thoroughly after the immediate battle is over that insures to us the real returns of a campaign. This story in a few words gives to the people of the county a precise picture of the extent to which extension recommendations were followed by them and what results were obtained in terms of reduced infestation in each community.

BOLL-WEEVIL infestation counts made during the last week in June show that those communities in Nueces County which practiced early clean-up of cotton fields last fall have a minimum number of boll weevil compared to the communities which were backward in their clean-up, according to information that has been received here from F. W. Hoepfner, Nueces County agricultural agent, whose headquarters are at Robstown.

Last fall, on November 15, while the early season clean-up campaign was underway R. R. Reppert, entomologist of the extension service and the county agent made observations to determine the percentage of clean-up of cotton fields in various communities of the county. It was found at that time that the London, Chapman Ranch, Petronila, Robstown, Driscoll, and East Bishop communities had cleaned up around 95 per cent of their growing cotton. In the western part of the county comprising Calallen, Banquete, and Agua Dulce communities, growers had cleaned up only 50 per cent of their growing cotton.

Observations last week showed that the early clean-up areas in the eastern part of the county showed from 2 per cent to 5 per cent infestation compared to 25 per cent to 80 per cent infestation in the western communities, it was said.

The presence of more brush pastures in the western part of the county, allowed hibernating quarters, together with backward clean-up accounts for the heavy infestation in these communities, Mr. Hoepfner said. It shows, however,



Augusta County Booth at the State Fair

THE COUNTY home demonstration exhibits at the Virginia State Fair last fall were planned to show clearly just one line of extension activity in each booth. The exhibit shown here was prepared by Augusta County and based on the major project for women's clubs for 1931.

A set of six chairs was found in very bad condition at a farm home—two had the backs off, several were very much weather-beaten from having been thrown out of doors or left on the porch, and all of them were without seats. They were soft wood and too much battle-scarred to be nicely finished with oil and wax. The committee used these chairs to show the steps in refinishing soft wood. On each chair was placed one line of the following verse to show the different steps in the work:

that the campaign waged for the last four years for early clean-up of cotton fields after the cotton crop is harvested is showing splendid results in weevil control and should be evidence for its continued practice, he added.

Once in the attic dejected I stood,
They scraped, dusted, and sandpapered my wood,
Away to the store for some stain
they ran,
Clear varnish, too, I seemed to demand
Rubbed with steel wool, a dull finish
for me
A complete transformation, I think
you'll agree.

"A wall hanging and two units of furniture and accessories which had been made or refinished by women in the county, were used in the background. As activity there were two women working in the booth showing how to refinish hard woods, such as mahogany and walnut, and also how to cane chair seats.

Each booth emphasized one subject, such as household linens; inexpensive kitchen equipment; table service; homemade toys; and health through good foods, exercise, and posture.

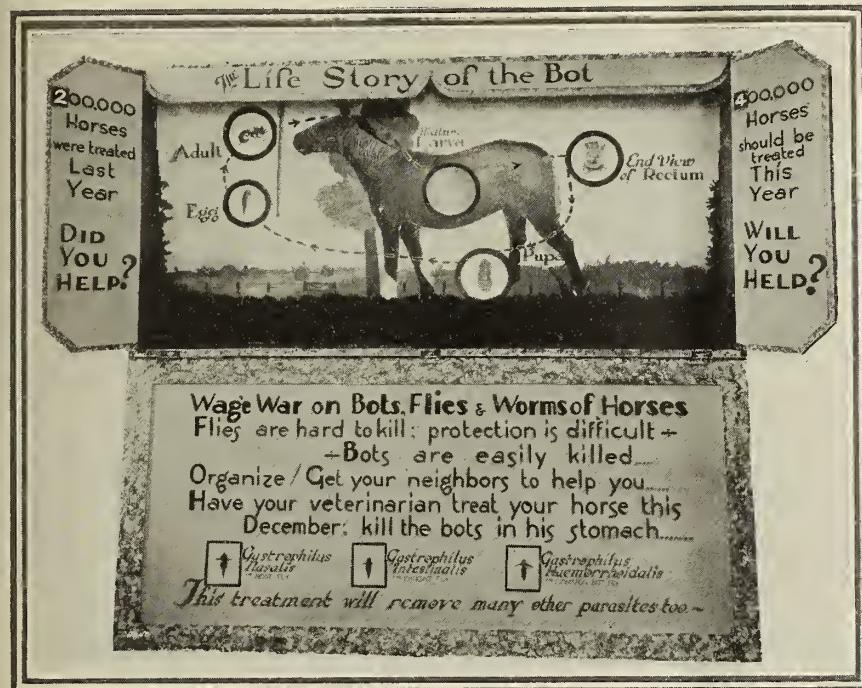
SORGHUM SATURDAY was observed recently in Arkansas as a part of the program to promote the use of Arkansas products. The home consumption of this product was emphasized by exhibits and demonstrations.

Iowa Wages War on Bot Fly

A CAMPAIGN to eradicate the nose fly of horses has gained impetus rapidly in several Iowa counties during the past two years. Conservative estimates place the number of horses treated in Iowa during the 1930-31 season at 200,000, says L. R. Combs, extension editor, Iowa State College.

ship who were willing to pay a reasonable sum to have the recommended dosage of carbon disulphide administered to their horses, colts, and mules by a competent veterinarian.

In 1928 Dr. K. W. Stouder, extension veterinarian, and F. D. Butcher, extension entomologist, intensified the edu-



The first step in the program was to educate farmers concerning the nature of the flies and their life cycle. Three distinct species of bot flies have to be dealt with in Iowa. The larvae or bots of each of these, however, spend several months attached to the walls of the stomach or upper intestine. Carbon disulphide administered to the horses in the late fall or winter is recommended to destroy these bots and reduce the number of flies which will be present the next summer.

Bot control work in Iowa had its beginning in 1905, when F. C. Bishopp, of the United States Bureau of Entomology, met with the extension workers, veterinarians, and entomologists of the Iowa State College. During the two years following, the educational work went on and interest grew.

Campaigns Organized

The first public meetings for the consideration of the organizing of campaigns were held in the fall of 1927 in Morgan Township, Woodbury County, and Frankfort Township, Chicassaw County. Few men were found in Frankfort Town-

tional work, and among other things prepared an exhibit showing the life cycle of the nose bot fly and its course through the horse. The results were encouraging, for in the fall of 1929 areas of one township in each of several counties were organized as demonstrations for those counties. The same plan of first educating the horse owners about the flies, three varieties of which infect horses and mules, and explaining the way in which the larvae producing the flies may be killed, was followed. Surveys made in these townships the next summer showed that more than 90 per cent of the horse and mule owners were well satisfied with the results obtained and the benefit to their horses from this treatment.

District Meetings

In the fall of 1930 series of well-attended district meetings were held where county agents, veterinarians, and horse owners were asked to come together to hear a discussion of the problem of controlling the bot fly and the results already obtained. News stories and some mats of cuts were prepared

by the extension editor and distributed to local newspapers through the county agents and veterinarians. These stories explained the need for the nose fly control, explained how it should be done, and gave the results obtained in other places.

As a result of these meetings and publicity, calls were received for meetings in 36 counties where one or more townships wanted to organize. In all of these townships an organization was set up with a leader in each school district who circulated an agreement form on which horse owners who were willing to join the organization entered their names and the number of horses owned. When these forms were filled out they were sent to the county agent who in turn passed them on to the local veterinarian who had previously agreed that where a number of horses in a small area were presented for treatment, the cost of mileage, treatment, and material used would not exceed 50 cents per head. Treatment was administered in most cases during the months of December and January.

Veterinarians Cooperate

The bot-fly eradication project has had the hearty support of the Iowa Veterinary Medical Association and has resulted in many veterinarians working in close cooperation with the educational work of the local farm bureau along these lines. It has taught the horse owners that by close cooperation they can reduce the prevalence of parasites. Cooperation and working on a community basis have reduced the expense of the work materially for each man and have caused them all to realize that animal parasites are problems of increasing importance in a county where the livestock population is high and that when such problems become acute methods of combating them usually can be found.

So that the work might be more widely understood, an exhibit in motion was prepared to use at fairs the past summer and this fall. The exhibit illustrated a horse in the typical attitude of head tossing caused by attacks of the nose fly. Transparencies in the model of a horse beginning at the nose showing an adult fly making the attack which causes the head tossing, the "bots" in the stomach and as they are later passed out and the pupae in the ground were illustrated in a cycle illuminated by electric lights. This together with appropriate lettering made an attractive and interesting exhibit of educational value and is in good demand in the territory where the project has been adopted or is being considered for next year.

Alabama and Oregon Work Together

A FEW YEARS ago two directors of extension got together at an annual meeting of the Association of Land-Grant Colleges and Universities and talked about winter legumes. One of these directors, Paul V. Maris, of Oregon, said that farmers in his State were producing excellent seed of Austrian winter peas and that they were looking for an outlet for them with a view to increasing their production.

The other director, L. N. Duncan, of Alabama, said: "That's very interesting to me, for our farmers in Alabama are increasing their winter-legume plantings and they are looking for a dependable supply of good seed. They want good seed at a low price."

Then they got together on it. Through two organizations of farmers a contract was made for the production and the purchase of seed. An organization of Oregon growers agreed to produce Austrian pea-seed on a given number of acres, and the Alabama Farm Bureau Mutual Supply Association agreed to purchase these seed at a given price. There was a guaranty on the part of the buyer as to price and payment.

The agreement gave the buyer authority to inspect the seed in the field and to supervise harvesting, sacking, and shipping. C. L. Hollingsworth, county agent for Clarke County, Ala., went to

Oregon in the summer of 1930 where he inspected the fields and remained with the growers while they harvested and shipped their seed.

In 1930, Alabama farmers bought 1,290,100 pounds of winter legume seed, the majority of it being Austrian peas from Oregon. This was a substantial increase over 1929, and 1931 showed an increase over 1930.

The agreement which obligates a group of farmers near the Atlantic coast to a group of farmers near the Pacific coast has been beneficial to each group. The Pacific coast farmers have increased the production of Austrian pea seed with assurance of sales. Consequently, they are now in the seed-production business on a bigger and a more profitable scale.

On the other hand, Alabama farmers are obtaining for less money first-class seed, the quality of which is assured. They are proceeding with their soil-building program to which winter legumes is the key.

The direct connection resulted also in lowering the price of seed to the buyers because no middlemen were involved. It was a direct transaction. By a study of freight rates and shipping, reductions in transportation were made, some of the seed having been shipped by boat through the Panama Canal.

brates various steps in shearing, preparation of fleece, grades, and grading. 44 cents.

Growing Healthy Pullets, series 276. 33 frames. Illustrates the more important points to be observed in brooding and rearing chicks. 35 cents.

IN THE State of Vermont, 1,500 4-H club girls are engaged in clothing work. A program covering seven years of work for these girls has just been arranged by Martha Leighton, assistant State club leader.

The first year's work is in the nature of home service, making of articles, care of clothes, and improvement of health. The work for the second year follows the same order under an advanced program. The third year marks another advance with emphasis on work connected with school life; then follow programs designed for four years of even more progressive work, entitled, "The Thrifty Maid," "At Home or Abroad," "4-H Club Outfit," and "Little Tots."

This plan for seven years of clothing club work provides an opportunity for membership by the older group of girls in whom the whole extension staff is interested in reaching. The plan does not imply that club girls will take the whole seven years, but does provide, however, work of interest to many different types of club girls.

New Film Strip Series

THE SERIES entitled "Good Equipment Saves Time and Energy," consisting of 56 frames and illustrating good equipment which the home maker may install in her home, and which will save time and energy of herself and her family, has been completed by the Office of Cooperative Extension Work. The film strip may be purchased from the contracting firm at 44 cents, provided authorization to purchase is procured from the Office of Cooperative Extension Work.

Six new film strip series, as listed below, were completed by the Office of Cooperative Extension Work in cooperation with the Bureaus of Animal Industry, Rural Engineering, Chemistry and Soils, and the State of New Hampshire since August 1, 1931.

Legume Inoculation, series 206. 39 frames. Supplements Farmers' Bulletin 1496, Inoculation of Legumes and Non-legumes. This series illustrates the

value of legumes in the fixation of nitrogen. 35 cents.

Plows and Plowing, series 252. 40 frames. Illustrates the most important adjustments and the uses of the common types of plows. 35 cents.

Roadside Marketing, series 273. 60 frames. This series is mainly composed of illustrations sent in by L. A. Daugherty, marketing specialist, New Hampshire, collected from Michigan, Massachusetts, New Jersey, and New Hampshire. The series illustrates roadside-market stands, signs and advertising, displays, and diagrams of sales. 44 cents.

Good Equipment Saves Time and Energy, series 274. 60 frames. Illustrates that good equipment which the home maker will install in her home will save time and energy to herself and that of the members of her family. 44 cents.

Wool-Shearing and Preparation of Fleece, series 275. 54 frames. Illus-

According to County Agent O. P. Griffin and Maysie Malone, home-demonstration agent, over 500,000 cans of home-grown food were canned in Brown County, Tex., in 1931.

EXTENSION SERVICE REVIEW

Issued monthly by the EXTENSION SERVICE of the United States Department of Agriculture Washington, D. C.

C. W. WARBURTON, Director
C. B. SMITH, Assistant Director

REUBEN BRIGHAM, Editor

The Extension Service Review is published in the interests of workers and cooperators of the Department of Agriculture engaged in extension activities. It contains official statements and other information necessary to the performance of their duties and is issued free to them by law. Others may obtain copies of the Review from the Superintendent of Documents, Government Printing Office, Washington, D. C., by subscription at the rate of 50 cents a year, domestic, and 75 cents, foreign. Postage stamps will not be accepted in payment.

• ACROSS • THE • EDITOR'S • DESK •

They Use The Facts

TO HAVE the facts is essential to profitable production. This is the thought of Harold E. Wahlberg, farm adviser for Orange County, Calif. Citrus growers of his county followed their production costs for five years. With the help of these facts, they expect in the face of growing competition to continue in business on a profitable basis. The big thing, as Wahlberg sees it, is for the individual grower to analyze his own business and intelligently adjust his costs to meet the lowering trend of commodity prices. The grower, he contends, who applies an efficiency analysis to his business and thereby disposes of unprofitable trees and practices will be able to weather market conditions that may sink the grower who can not produce fruit cheaply.

Why Do We?

WHY do the Department and the agricultural colleges give out information on refinishing furniture, window curtaining, making rugs, and planting flowers and shrubs? What has such information to do with obtaining a better income from agriculture? Why should home demonstration agents devote part of their time to such matters? These questions came to my desk recently. I passed them on to Mary Rokahr, sure that she would have the answer. Here it is.

She says, "If farm life is to be successful, there must be happiness and contentment in the home. Whether or not there is such happiness and contentment depends in a large measure on how comfortable and attractive the home has been made. Is it a home to which the home maker welcomes the occasional visitor with pride and assurance? Do the children gladly bring their friends to it? If not, the life in that home is not a success. Happiness and contentment are lacking in it. Yet, if she knows how, the home maker, even with limited means, can make her home comfortable and attractive.

"It is through doing a multitude of little things in the right way that attractiveness and comfort are obtained. That is why information on refinishing furniture, window curtaining, making rugs, and planting shrubs and flowers is vital. The sum of these things is a comfortable and attractive home. How to obtain them, how to use them, is what the home maker wants to know."

Much Can Be Accomplished

ONCE IN A WHILE we come upon an unusually apt phrasing of some underlying thought on extension work. Essie M. Heyle, of Missouri, in writing sometime ago about attractive homes expressed such a thought in an unusually happy fashion. It's one, I think, that we can not afford to miss. "Much can be accomplished," she says, "when there is desire, knowledge, and willingness to work even though there is little or no money to spend." It's a saying tuned to the times. The knowledge needed we should be able to supply, but desire and willingness to work—they are things not so easy to give. Still, that's a part of the extension job, isn't it?

She Saves Mileage

PLANNED TRIPS save many miles and many dollars. This is a cardinal point in the plans that Pearl Sims, home demonstration agent in Plymouth County, Iowa, outlines for holding down expenses. She figures that without reducing the effectiveness of her work, she can save with careful planning much unnecessary travel.

In keeping up the work in communities already organized, Miss Sims uses letters and phone calls. She gets the letters out well in advance of the time when action is required. She cultivates the art of making the phone call as satisfactory and effective as the personal visit. When organizing a new community, personal visits, of course, are necessary. Miss Sims lists her prospects, plans her route of travel carefully, takes her lunch along, and puts in a full day of travel.

When training schools are scheduled, two are planned on succeeding days. She spends the night in the community instead of returning to headquarters. "It is no hardship," she says, "to stay with friends and such an arrangement last year saved 250 miles of travel for me in one township alone."

Here's One Answer

HERE'S THE WAY V. G. Applegate, county agent for Harrison County, Ohio, answers the farmer's question, "What must I do?" "Find something that you can do and then make it raise the cash income that you need, is what I advise," he says. "For instance," he continues, "one of our farmers dried 150 gallons of sweet corn and sold it at \$2.50 per gallon. Another farmer raised 40 to 50 pound white pigs to meet a special demand. These pigs bring him from \$8 to \$10. Some of our local men are butchering and retailing their chickens, turkeys, and lambs at a considerable advance in price.

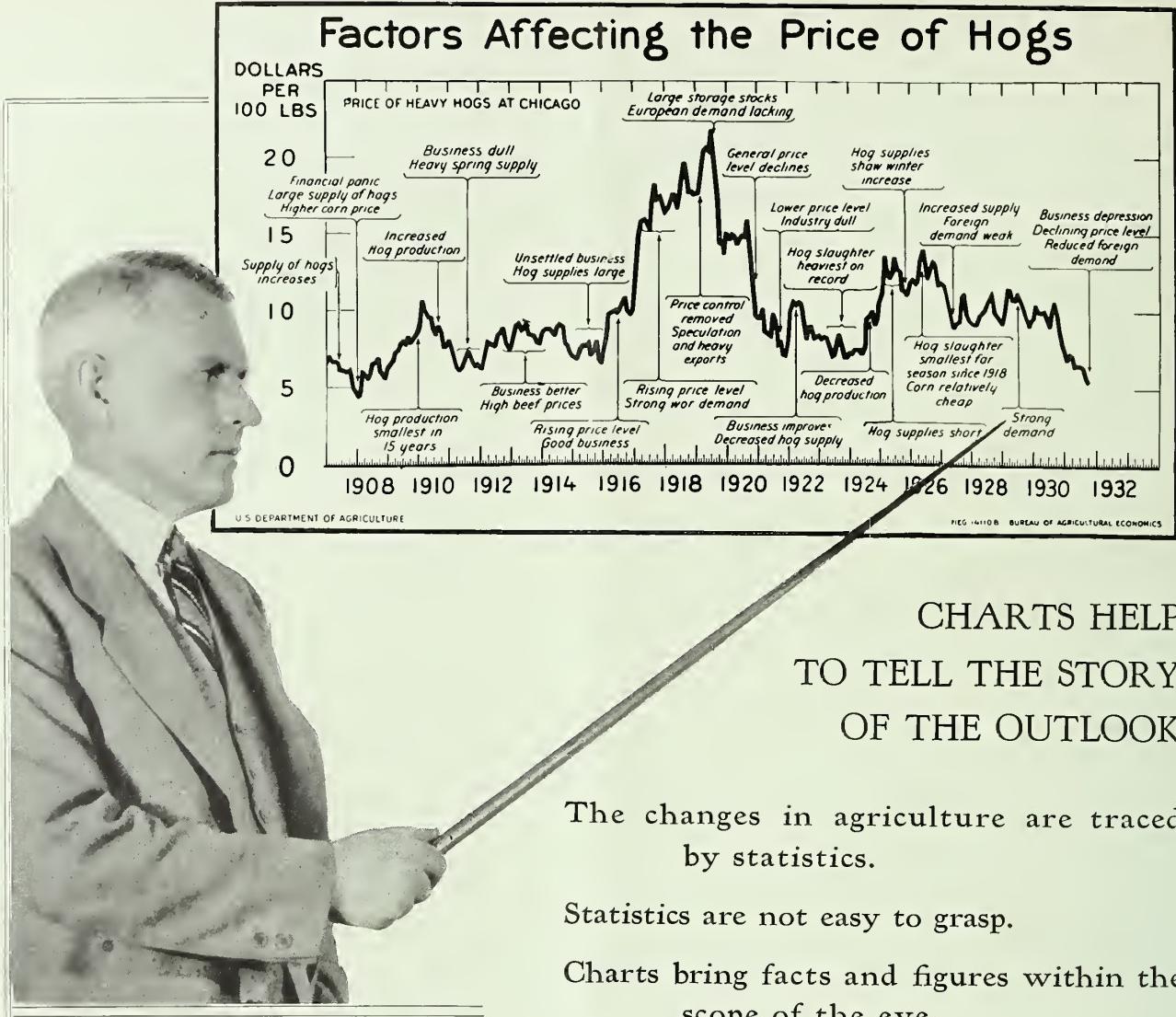
"Other farmers are studying markets in order to better know what to produce and when to sell it. Organized market tours conducted by the county agent have started this trend of thinking and the effect can be seen in the changing production of lambs and hogs and the increasing business of the cooperative shipping association."

On Our Doorstep

W. A. LLOYD laid a weighty problem on the extension doorstep in his recent address before the extension section of the Land-Grant College Association, discussing the future of extension work with young men and women. "The curve of extension interest, as I see it," he says, "is markedly upward from 10 to 13 years of age. After that, it drops rapidly and practically disappears at the age of 20. It reappears again at about 30 for a slow climb to 40 or 45 and then remains constant until 60 or 65 years is reached."

Here's a problem, indeed. What can extension do to interest this group of young men and women between the ages of 16 and 30? From this group, Lloyd points out, come the new recruits to the army of farmers and farm home makers of each succeeding year. "How can extension aid them?" he asks and then gives his suggestions. It's an address well worth reading and thought.

R. B.



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